

Cocoa chemistry and soybeans

Supplies

- 1-qt plastic bags
- 1 tablespoon cocoa
- 1 ½ tablespoon sugar
- 2 9-oz glasses of soymilk
- 2 ½ tablespoon chocolate milk mix
- ½ teaspoon soy lecithin powder

Directions

1. Add cocoa and sugar in a bag, then mix
2. Add 9 oz of soymilk to the bag, seal and shake vigorously until all powder is mixed
(Caution: be sure the bag is sealed completely!)
3. Pour into cup
4. Observe the texture, look, and smell. Taste it.
5. Add soy lecithin. Stir well.
6. Observe the texture, look, and smell. Taste it.
7. Add chocolate milk mix to the other cup of soymilk. Stir well.
8. Observe the texture, look, and smell. Taste it.
Which milk do you like better?

What's the science?

When soy lecithin is added to the milk and cocoa mixture, it acts as an **emulsifier**. An emulsifier is a molecule with one part attracted to the oils in the mixture and another part that is attracted to the water. The addition of the lecithin helps the cocoa and milk mix.